

# PENDLETON FIRE WEATHER OPERATIONS PLAN 2006

## LOCATION:

National Weather Service Office  
2001 NW 56th Dr.  
Pendleton, OR 97801.

## NEW FOR 2006

New Red Flag Warning criteria for lightning  
New dissemination call procedures of Red Flag Warnings.  
NDFD-based FARSITE Weather Support.

## HOURS:

The Pendleton Fire Weather Program is committed to establishing a program with staffed trained to respond to fire weather needs 24 hours per day. In addition a Fire Weather shift will be scheduled during the following times:

Land Management Season Shifts: 7:00 AM - 4:00 PM Monday - Friday.  
Late March - May and late September - October.

Fire Season Shifts: 7:00 AM - 4:00 PM 7 days a week  
June to late September.

The National Weather Service office in Pendleton is open 24 hours a day , 7 day a week and is fully staffed. If there is a need to support a project, additional forecasters can be made available. **However, under the provisions of the National Agencies/NWS Agreement, special services provided by the Pendleton Fire Weather office will be done on a reimbursable basis.**

## PHONE NUMBERS

Fire Weather Desk	(541) 276-8134
General	(541) 276-4493
Fax	(541) 276-8253

## INTERNET ADDRESS and E-MAIL:

<http://weather.gov/pendleton>

[michael.vescio@noaa.gov](mailto:michael.vescio@noaa.gov)  
[dennis.hull@noaa.gov](mailto:dennis.hull@noaa.gov)  
[joe.solomon@noaa.gov](mailto:joe.solomon@noaa.gov)

Meteorologist-in-Charge  
Warning Coordinator Meteorologist  
Fire Weather Program Manager

## STAFF

<u>Name</u>	<u>Position</u>
Mike Vescio	Meteorologist-in-Charge
Dennis Hull	Warning Coordination Meteorologist
Jon Mittelstadt	Science and Operation Officer

All Senior and Journeyman Forecasters will train and be certified to issue all forecast from the Fire Weather desk. However a **core group** of forecasters will provide the majority of forecasts during fire season.

<u>Name</u>	<u>Position</u>
<b><u>Joe Solomon</u></b>	Fire Weather Program Leader / Senior Forecaster / IMET
<b><u>Mary Smith</u></b>	Senior Forecaster
Roger Cloutier	Senior Forecaster
Vincent Papol	Senior Forecaster
<b><u>Zaaron Allen</u></b>	Senior Forecaster
Gordon Hepburn	Journeyman Forecaster
Diann Coonfield	Journeyman Forecaster
Alan Polan	Journeyman Forecaster

## COMMUNICATIONS

All forecasts including spot forecasts are input into the National Weather Service communication system, WIMS and on Pendleton's Internet home page. Forecasts can also be faxed to customers who do not have access to these systems. Internet address is: <http://weather.gov/pendleton>

## WEATHER BRIEFINGS

Internet based weather briefings usually begin in May. During Land Management season briefings will be held Monday and Thursday. During peak fire season, normally mid June-September briefings will be daily at 0930 PDT. Phone briefings are available 24 hours per day.

## AGENCIES SERVED

USFS: United States Forest Service  
BLM: Bureau of Land Management  
NPS: National Park Service  
BIA: Bureau of Indian Affairs  
USF&W: United States Fish and Wildlife  
ODF: Oregon Department of Forestry  
DNR: Southeast Washington Area

County and Local Fire Jurisdictions in southeast Washington, central and northeast Oregon.

## **FORECAST SERVICES**

### **Land Management and Fire Weather Planning Forecasts:**

Routine land management planning forecasts are issued seasonally in the early and late part of the burning season. They are available twice a day Monday through Friday at 0900 and 1530 PDT. Specific start and stop dates are coordinated with customer agencies. Routine fire weather planning forecasts are available twice daily during the heart of the fire season, usually from early June through late September. They will be issued at 0900 and 1530 PDT.

### **Spot forecasts/FARSITE/Special request Forecasts:**

Spot forecast and **FARSITE weather data** are available year round for wildfires, prescribed fires, or any other critical land management activities conducted by ALL land management agencies. The NWS will support non-federal, non-wildfire activities such as HAZMAT and search and rescue. We are urging land managers to customize spot forecast requests for the parameters that are needed and provide critical weather thresholds that may adversely impact the burn, such as wind, relative humidity, or burn period. This will allow the forecaster to concentrate on the specific data and time line needed rather than a host of parameters that may be of little interest. Spot forecasts take precedence over normal office duties. **As implemented in 2003, the Region 6 National Weather Service offices will: require at least one observation from the fire site for prescribed spot requests. In addition valid times for spot forecasts will be 12 hours from issuance.**

Information required by the fire weather forecaster from the requesting agency is found on our internet web site: <http://spot.nws.noaa.gov/cgi-bin/spot/spotmon?site=pdf> NWS form D-1, items 1-12, can be used for fax requests. A spot forecast for a planned ignition the next day may allow us to provide you with more lead time before the planned prescribed burn. Feedback of how well the forecast verified is extremely valuable in order to provide more accurate subsequent forecasts. As such, the forecasters in Pendleton request all observations taken from the burn site be sent to our office. This may be accomplished through FAX or electronically. Phone consultations are available 24 hours a day.

### **NFDRS Trend Forecasts**

A numerical zone trend forecast is prepared and disseminated to WIMS by 1540 each afternoon from June through September. In addition, two “point” forecasts are also prepared for Haystack and Fall Mountain RAWS. The trend forecasts are used to compute the expected NFDRS indices valid for the following day. The number of NFDRS indices forecast by the weather office depends only on the number of NFDRS observations input into WIMS by the fire agencies. If observations are not entered into WIMS by 1500, a forecast will not be produced for the zone(s).

## **Incident Meteorologist Services**

Pendleton has certified Incident Meteorologists (IMETS) on staff available for wildfire, HAZMAT, or other emergency dispatches. To request an IMET, contact the appropriate fire agency dispatch office.

## **NON-FORECAST SERVICES**

There are several duties that fall into the non-forecast services, including but not limited to teaching assignments, customer meetings, customer consultations, preparation of annual reports, preparation of annual operating plans, program management, research and in-house training of personnel.

There is a need for advanced notice (3 weeks) for teaching assignments, customer meetings and consultations. The NWS-NWSEO Negotiated Agreement provides rules for scheduling of bargaining unit employees. NWS management has limitations regarding modification of the work schedule after it has become fixed without paying overtime.

All requests for teaching assignments, customers meetings and customer consultations will be honored provided they are scheduled more than three weeks ahead of time, and they do not conflict with other Fire Weather commitments. NWS Pendleton will make every effort to fulfill requests for teaching assignments, customer meetings and consultations that are scheduled with less than three weeks lead time, or conflict with other Fire Weather commitments. For training requests, please contact Joe Solomon at NWFO Pendleton (541) 276-8134 or by e-mail [joe.solomon@noaa.gov](mailto:joe.solomon@noaa.gov)

## **FIRE WEATHER WATCHES AND RED FLAG WARNINGS:**

Please refer to the Glossary for the formal definitions of Fire Weather Watches and Red Flag Warning events. Specific Red Flag criteria differ for each situation and district. The following are criteria which would warrant a Fire Weather Watch/Red Flag Warning in the Pendleton Fire Weather District:

### **Criteria:**

Any or a combination of the following combined with very dry fuels are criteria for the issuance of a Fire Weather Watch or a Red Flag Warning depending on the lead time:

- Abundant lightning (scattered thunderstorms) in conjunction with sufficiently dry fuels (fuels remain dry or critical during and after a lightning event).
- Haines Index of 6 in combination with RH of 15% or less.
- Strong winds combined with low relative humidity which meet the criteria listed below:

Zones (630, 631, 632, 633, 634, 635, 638, 675 & 681) for two hours at two locations (determined by the RH/WIND in Table A)

Zone 609: criteria is at least TWO stations (including Greyback) reporting RH 20% or less AND wind speed 10 mph or greater for 2 hours.

Zone 610: criteria is TWO stations for multiple hours in either scenario A or B below:

- A) HeHe Butte RAWS and Haystack RAWS reporting RH of 15 percent or less AND wind speed of 10 mph or greater for 4 hours in a 9-hour block (afternoon and evening) OR
- B) HeHe Butte RAWS OR Haystack RAWS reporting RH of 15 percent or less AND wind speed of 10 mph or more for 4 hours in a 9-hour block (afternoon and evening) AND one other RAWS or Station reporting the same for two hours.

Zone 611: criteria is any TWO stations (including Timothy RAWS) reporting RH of 15 percent or less AND wind speed of 10 mph or greater for at least TWO hours

**Table A.** National Weather Service Pendleton Wind vs RH Red Flag/Fire Weather Watch Criteria Table

Note: This is only one element in determining the necessity for a Red Flag Warning or Fire Weather Watch and shall not be the solitary justification.

**Columbia Basin ZONES 631 & 675**

**SUSTAINED 20 FT WIND OVER WIDESPREAD AREA**

(10 MINUTE AVERAGE in MPH)

	5	10	15	20	25	30
30						W
25					W	W
RH(%) 20				W	W	W
15			W	W	W	W
10			W	W	W	W

## **The Central and Northeast Mountains ZONES 630...632-635...638 AND ZONE 681**

### **SUSTAINED 20 FT WIND OVER WIDESPREAD AREA**

(10 MINUTE AVERAGE in MPH)

		10	15	20	25	30	35
	30						
	25					W	W
RH(%)	20			W	W	W	W
	15			W	W	W	W
	10		W	W	W	W	W

A Red Flag Warning or Fire Weather Watch may be issued if the wind and humidity fall within the warn section of Table A. Fuel dryness, both live and dead, will be determined based on the 3 steps below.

1. The forecaster is required to check with fire/land management agencies to ensure that fuels are dry enough to support large fire potential.
2. 1000 Hr fuel moisture should be less than 12% and 100 Hr fuel moisture less than 10%
3. Also refer to GACC "Dryness Level" for additional fuel moisture evaluation.

### **Red Flag Warning Dissemination:**

Red Flag Warnings and Fire Weather Watches shall be issued using the Red Flag Statement (RFW) and will be headlined in the routine Fire Weather Forecast. All Red Flag Warnings and Fire Weather Watches will be cancelled using the Red Flag Statement (RFW) and the Fire Weather Forecast will include a headline stating such.

All Red Flag Warnings will be disseminated utilizing the National Warning System (NAWAS) network

All issuances of Red Flag events will be coordinated beforehand with the agencies included in the watch/warning area and with adjacent fire weather offices if the watch/warning is for a zone on a common district boundary. In order to rapidly disseminate Fire Weather Watches/Red Flag Warnings or other information of rapidly changing or hazardous weather conditions that do not meet Red Flag criteria, but will affect fire control or pose a safety threat a priority calling list has been established.

**NWFO Pendleton will contact the dispatch offices affected by warnings who will then contact other affected land management agencies in those zones.**

## **USER AGENCY RESPONSIBILITIES**

There are several responsibilities of the user agencies including:

- 1300 PST NFDRS observations.
- Site observations for Spot forecast requests. **A representative observation from the burn site is required for all prescribed fire spot forecast requests.**
- Quality Control of RAWs observations
- Timely maintenance of RAWs sites.

## **FORECAST VERIFICATION**

Routine verification will be made on Red Flag Warnings and Spot Forecast turnaround times. In addition selected NFDRS trend forecasts for temperature, relative humidity, and fuel moisture will be verified. Results of the verification will be published in the Fire Weather Annual Summary. The National Weather Service will work with local fire agencies and the Pacific Northwest Coordination Group to develop a baseline for product verification.

## **FIRE WEATHER FORECASTER PROFICIENCY & CURRENCY STANDARDS**

The National Weather Service proficiency standards for service to the fire weather users are shown in Appendix A. The National Weather Service and the Pacific Northwest Wildfire Coordination Group will review the progress in meeting the standards. Prior to each fire season, the Annual Operating Plan will provide a list of currently qualified forecasters and those expected to be qualified at each weather Forecast office who will be providing fire weather services during the upcoming year.

## **FORECAST DISTRICT**

The Pendleton Fire Weather District currently covers the east slopes of the Cascades mountain range from the Deschutes National Forest to the alpine reaches of the Yakama Indian Reservation, central Oregon, the northeast quadrant of Oregon (including Baker county and Harney county north of highway 20), and Southeast Washington (Benton, Franklin, Klickitat, Yakima Walla Walla, Columbia, Garfield and Asotin counties). Please see the district map for specific outlines of the Fire Weather Zones.

## **GEOGRAPHICAL AREA DESCRIPTIONS (See Zone Map)**

The Pendleton Fire Weather forecast will be sectioned by Fire Weather Zone. This will result in 12 separate zone forecasts. These zones are based on terrain, elevation, weather characteristics, and political boundaries. The following are descriptions of each of the twelve Fire Weather Zones in the Pendleton Fire Weather district.

### **East Slopes of North Oregon & Southern Washington Cascades – Fire Weather Zone 609**

Represents the portion the east slopes of the Cascades from Mt Hood NF to western Klickitat County as well as adjacent foothills under ODF & WA DNR protection.

Bounded by the Cascade crest on the west, the Yakima County line on the north and the northern boundary of the Warm Spring Indian Reservation on the south. The eastern boundary lies along Highway 97 from Satus Pass south to Biggs, OR, then runs west along the Columbia River to The Dalles, then follows Highway 197 south to near Maupin then roughly follows Wapinita Road to the northern border of the Warm Springs Indian Reservation boundary.

This zone has elevations that range from the peaks of Mt Hood (11000 feet) down to the eastern Columbia River Gorge (200 feet) and includes the Foothills of the Cascades.

### **East Slopes of Central Oregon Cascades - Fire Weather Zone 610**

Represents Warm Springs Indian Reservation and the Sisters RD of the Deschutes NF.

Bounded by the Cascade crest on the west and the boundaries of Warm Springs Reservation and Sisters RD on the north, east and south.

This zone has elevations that range from the crest of the Cascades (10000 feet) down to the Foothills of the Cascades (2000 feet).

### **Deschutes NF (minus Sisters RD) - Fire Weather Zone 611**

Includes the Deschutes NF with the exception of the Sisters RD...includes interior islands of private land and high Cascade wilderness areas.

Bounded on the west by Cascade crest...on the north by the southern boundary of the Sisters RD...and on the east and south by the Deschutes Forest boundary.

This zone has elevations that range from the crest of the Cascades (1000 feet) down to the high plateau deserts (4000 feet).

### **Central Oregon Mountains - Fire Weather Zone 630**

Represents the Ochoco NF, Crooked River National Grasslands, Prineville ODF, Prineville BLM of Central Oregon.

Bounded on the west by the borders of the Deschutes NF and Warm Springs Indian Reservation. North boundary runs west to east from the northeast section of the Warm Springs Indian Reservation to north central Wheeler County. Southern boundary roughly follows the southern border of Deschutes County east of the Deschutes NF and includes



the extreme northeast portion of Lake County around Glass Butte. The west boundary roughly follows the east border of Crook County then cuts west across southern Wheeler County just north of the northern Crook County border then turning north again in western Wheeler County meeting the northern border in north central Wheeler County.

This zone covers the mountains of central Oregon including the grasslands and high plateau deserts. Elevations range from 2500 feet in the Grasslands to 7000 foot peaks in the Ochoco NF.

### **Columbia Basin of Oregon and Southeast Washington - Fire Weather Zone 631**

Represents the Lower Columbia Basin of Oregon and Washington. Includes the Foothills of the Blue Mountains. Agencies responsible for fire protection in this area are ODF Pendleton, ODF The Dalles, Prineville BLM, Spokane BLM, Vale BLM, and southeast DNR.

West boundary is the Columbia River Gorge. South boundary follows the Foothills of the Blue Mountains from north central Oregon into southeast Washington. North boundary follows the Horse Heaven Hills through southern Benton County of Washington then turns north following the Columbia River to the east border of the Hanford Reach national Monument. Then it runs east along the northern borders of Franklin, Columbia, Garfield and Asotin Counties of Washington.

This zone covers the flat or smooth rolling hills in the Lower Columbia Basin of Northeast Oregon and Southeast Washington. Elevations range from about 200 ft MSL along the Columbia River to approximately 3000 ft MSL along the foothills of the Blue Mountains.

### **Southern Blue and Strawberry Mountains - Fire Weather Zone 632**

Represents the Southern Blue Mountains in the Ukiah region down to the Strawberry Mountains in southern Grant County and northern Harney County. Agencies responsible are the ODF John Day, ODF Fossil, the Malheur National Forest, the Ochoco National Forest, Burns BLM, and Prineville BLM.

The west boundary follows the east boundary of zone 630 from north central Wheeler County down the eastern Crook County border then Down the west Harney County line to Highway 20. The southern border follows Highway 20 through Burns to the Malheur County line. The east border runs north roughly following the eastern Grant County border and the western border of Union County to near Ukiah. The north boundary runs along the Foothills of the Blue Mountains from north central Wheeler County through southern Umatilla County.

This zone is composed of varying and complex terrain, ranging from mountains with numerous steep sloped and narrow drainages to flat plateaus, meadows, and river valleys.

Elevations range from about 3200 ft MSL in the John day valley to over 8500 ft MSL in the Strawberry mountains

### **Northern Blue Mountains - Fire Weather Zone 633**

Represents the Elkhorn and Blue Mountains as well as the Grande Ronde Valley. Agencies responsible are the ODF Baker City, the Umatilla National Forest, the Wallowa Whitman National Forest, the Malheur National Forest, and Vale BLM.

The west boundary starts at Highway 26 and runs north along the Grant and Baker County line. Then follows the Union and Umatilla County line north until reaching the Blue Mountain foothills around Pendleton. Then it follows the Foothills into southeast Washington around the northern tip of the Blue Mountains which includes the southern portions of Columbia and Garfield Counties. Then it runs south along the east boundary of the Umatilla NF to the northern tip of the Grande Ronde Valley. Then it runs down the east side of the valley until it hits the north border of Baker County. From there it jogs around the Elkhorn mountains ending up back at Highway 26.

Terrain in this area is highly variable and complex, ranging from mountains with steep slopes and narrow canyons to flat plateaus, meadows, and river valleys. Elevations range from below 2500 ft MSL in the Grande Ronde valley to near 9000 ft MSL in the Elkhorn mountains .

### **Eagle Cap District - Fire Weather Zone 634**

This area is entirely within the Wallowa mountains and the majority of Eagle Cap Wilderness area. Terrain in this area is very complex with high mountains and numerous very steep slopes and narrow drainages. Elevations range from below 3500 ft MSL to near 10,000 ft MSL. The agency chiefly responsible is the Wallowa Whitman National Forest.

### **Wallowa District - Fire Weather Zone 635**

This represents the County of Wallowa minus the Wallowa Mountains. Agencies responsible are the ODF Baker City, ODF Wallowa, the Wallowa Whitman National Forest, and Vale BLM.

This zone contains highly variable terrain as well, ranging from mountains with steep, narrow drainages to the deep canyons of the Snake and Imnaha river, to open, flat Wallowa Valley. Elevations range from near 2000 ft MSL to near 6500 ft MSL.

### **Baker Valley – Fire Weather Zone 638**

This represents most of Baker County except for the Elkhorn Mountains in northwest Baker County. Agencies responsible are the ODF Baker City, the Wallowa Whitman NF and Vale BLM.

This zone contains highly variable terrain as well, ranging from mountains with steep, narrow drainages to the deep canyons of the Snake , to open, flat Baker Valley. Elevations range from near 3500 ft MSL to near 6000 ft MSL

### **Eastern Washington Southern Columbia Basin - Fire Weather Zone 675**

This represents Columbia Basin west of the Columbia River to the Foothills of the east slopes of the southern Washington Cascades. Agencies responsible for fire protection in this area are the Yakama BIA, Hanford Fire, Southeast DNR, Spokane BLM, Benton County Fire, Franklin County Fire

The southern border runs west to east from Satus pass along the Horse Heaven hills to the Columbia River. From there it runs north along the Columbia River (including the Hanford Reach National Monument) to I-94. Then it follows I-94 west to Ellensburg then turns south to Yakima following I-82. From Yakima it follows the Cascade Foothills south back to Satus Pass.

This area is characterized as a wide river basin with numerous west to east running ridge lines, and smooth rolling hills in the Lower Columbia Basin of Southeast Washington. Elevations range from about 200 ft MSL to just below 4000 ft MSL along the Rattlesnake Hills.

### **Yakama Alpine District - Fire Weather Zone 681**

This represents the southwest portion of Yakima County with is the Yakama Indian Reservation. The agency responsible for fire protection in this area is the Yakama BIA.

This areas covers the east slopes of the southern Cascades crest down to the southern boundary of the Yakima Indian agency. Elevation ranges from near 2000 ft MSL to 12000 ft MSL Mount Adams peak.